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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/808,744

03/24/2004

Thomas Gerard Shannon

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EXAMINER

COLE, ELIZABETH M

ART UNIT

PAPER NUMBER

1771

MAIL DATE

DELIVERY MODE

05/04/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/808,744

Applicant(s)

SHANNON, THOMAS GERARD

Examiner

Elizabeth M. Cole

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-10, 17-21 and 28-43 is/are pending in the application.
- 4a) Of the above claim(s) 28-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-10, 17-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 7-10, 17-21 are rejected under 35 U.S.C. 103(a) as obvious over JP 05-105705 as set forth in the previous action. With regard to the limitation that the nonwoven sheet contains an aqueous solution of a deliquescent material JP '705 teaches that it is known to apply the deliquescent salts without the post polymerizing step to fibrous supports and that when the post polymerizing step is omitted that the deliquescent salts tend to liquefy, (i.e., be present in solution). See paragraphs 0002-0004. Therefore, JP '705 teaches that deliquescent material can be present in solution but that if this is not desired that the post polymerization step can be employed to avoid issues related to the wetness of the fibrous material. The omission of an element or step is obvious if the function of the element or step is not desired. With regard to the newly added limitation regarding the claimed moisture content, since JP '705 teaches employing the claimed amounts of the hygroscopic material, and since the moisture content is due to the amount of the hygroscopic material, it is reasonable to presume that the material of JP '705 would have the claimed moisture content.

3. Claims 1-2, 4-5, 7-10, 17-19, 21 are rejected under 35 U.S.C. 103(a) as obvious over Taniguchi, U.S. Patent NO. 5,449,551. Taniguchi discloses a fibrous web such as paper or a nonwoven fabric to which is applied 1-300 wt% based on the weight of the

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fibrous web of a hygroscopic material. The hygroscopic materials include calcium chloride and sodium chloride. See abstract and col. 3, lines 4-8. The web comprising the hygroscopic material can be used to make a wet wipe or can be used to make a dry towel which can be used to dry the hands, (see examples), depending upon how much of the hygroscopic material is present. The hygroscopic material absorb moisture from the atmosphere and thus meet the limitation of the deliquescent material which is in solution due to absorbing water from the atmosphere. See col. 4, lines 30-61.

Taniguchi does not disclose the equilibrium moisture content, however, since the same materials are used in the same amounts as in the instant invention, it is reasonable to presume that the materials would function the same way. With regard to the dry bulk, while Taniguchi does not disclose the dry bulk of the nonwoven material, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected a material having a dry bulk through the process of routine experimentation in order to arrive at a web having the desired strength, absorbency, hand, cushioning and durability, since these properties would have been recognized as being directly related to the dry bulk of the web. With regard to the claimed moisture content, Taniguchi anticipates the amount of hygroscopic material which is to be applied to the substrate, and therefore, since the moisture content is due to the amount of the hygroscopic material, it is reasonable to presume that the material of Taniguchi would have the claimed moisture content.

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4. Claims 3 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi as applied to claims above, and further in view of JP 05-105705. Taniguchi teaches a material comprising a hygroscopic material as set forth above. Taniguchi differs from the claimed invention because Taniguchi does not teach employing lithium chloride and does not teach employ synthetic fibers, although Taniguchi does teach employing "nonwoven fabrics" in addition to tissues. JP '705 teaches that lithium chloride was recognized in the art as equivalent to sodium chloride as a hygroscopic material for use in forming nonwoven fabrics which comprise hygroscopic materials. JP '705 also teaches employing synthetic fabrics to form the nonwovens into which the hygroscopic materials are placed. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have employed lithium chloride as the hygroscopic or deliquescent material in Taniguchi and to have employed synthetic fibers to make up the nonwoven of Taniguchi, motivated by the teaching of JP '705 that lithium chloride and synthetic fibers were recognized as equivalent to the sodium chloride and tissues employed in Taniguchi.

5. Applicant's arguments filed 2/23/07 have been fully considered but they are not persuasive.

6. With regard to the art rejection over JP '705, Applicant argues that the cited paragraphs of JP '705 are referring to the prior art rather than the invention of JP '705. However, while it is true that the cited paragraphs do refer to the prior art, they are still considered part of the disclosure of JP '705. JP '705 teaches that it is known in the art to apply the deliquescent materials to fibrous substrates as taught in JP '705 without the

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post polymerization step. JP '705 teaches that without the post polymerization step the deliquescent material liquefies or is in a solution and that when it is desired that the deliquescent material not liquefy that the post polymerization step can be used.

Therefore, even though the majority of JP '705 is directed to an invention wherein the post polymerization step is used, the reference also teaches that the other embodiment, wherein the post polymerization step is not used, is also known in the art. This other known embodiment corresponds to the claimed invention. Therefore, the rejection is maintained.

7. With regard to the rejection of Taniguchi, Applicant argues that in examples 1-13 the amount of hygroscopic material was only 15 weight percent or less and produced moisture absorption as shown in Table 4 of 18.1 weight percent or less. However, this argument is not persuasive for several reasons. First, the teachings of Taniguchi are not limited to what is found in the examples. Taniguchi clearly teaches that for use with tissues and other papers, that the preferred amount of the hygroscopic agent is from 1-100 wt %, (see col. 3, lines 38-47). Therefore, Taniguchi anticipates the range of 1-100 wt% of hygroscopic agent being added to tissues and other types of papers, and 1-300 wt% for nonwoven materials. Second, with regard to the moisture content of the finished product, the moisture content of the product will, as taught by Taniguchi, also depend upon the humidity of the atmosphere in which the product is located. (see col. 4, lines 58-61). Therefore, a one to one comparison of the particular moisture content shown in the table 4 with the claimed moisture content is not possible since the instant claims do not take into account the humidity in which the product is found. Finally, it is

noted that Taniguchi anticipates the amount of hygroscopic material which is to be applied to the substrate, and therefore, since the moisture content is due to the amount of the hygroscopic material, it is reasonable to presume that the material of Taniguchi would have the claimed moisture content. Applicant also argues that Taniguchi teaches away from adding too much of the hygroscopic agent. However, for paper products, Taniguchi teaches away from adding more than 100 wt%, while for nonwovens Taniguchi teaches away from adding more than 300 wt% at col. 3. The instant claims recite values of 2-150 wt percent and therefore the amounts which are taught away from by Taniguchi are much higher than the claimed amounts, while the claimed amounts are within the range disclosed as being preferred by Taniguchi. Therefore, the rejection is maintained.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth M. Cole whose telephone number is (571) 272-1475. The examiner may be reached between 6:30 AM and 6:00 PM Monday through Wednesday, and 6:30 AM and 2 PM on Thursday.

Mr. Terrel Morris, the examiner's supervisor, may be reached at (571) 272-1478.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

The fax number for all official faxes is (571) 273-8300.



Elizabeth M. Cole
Primary Examiner
Art Unit 1771

e.m.c